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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,202	12/16/2003	Henning Gerder	71163	5742
23872	7590	10/12/2006	EXAMINER	
MCGLEW & TUTTLE, PC P.O. BOX 9227 SCARBOROUGH STATION SCARBOROUGH, NY 10510-9227			LOPEZ, AMADEUS SEBASTIAN	
			ART UNIT	PAPER NUMBER
			3771	

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

NT

Office Action Summary	Application No. 10/737,202	Applicant(s) GERDER ET AL.	
	Examiner Amadeus S. Lopez	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/16/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 5, 6, 10, 15, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
3. With regards to claims 5, 15, and 20, the applicant claims a breathing gas tube, a process for using respiration system with a respirator, a respiration system, and the process comprising steps wherein the two-wire line is additionally designed as a tube heater, but the specification merely makes the same statement and does not define exactly how the two-wire line is "designed" to be a tube heater as well as a signal transmission line. Further claim 15 should be reworded so that it is comprehensible.
4. With regards to claims 6 and 10, the applicant claims that the contactless interface includes a first and second inductive interface without a description of what is embodied by a first and second inductive interface and how it works.

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5. Claims 6 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With regards to claims 6 and 10, the applicant claims a breathing gas tube wherein the contactless interface includes a first and second inductive interface. Within the specification in paragraph 15, the applicant states "the first inductive interface may be provided to transmit a supply voltage to the sensor means in addition to the signals." It not understood how a supply voltage could be transmitted without an electrical connection, or through this so-called contactless interface.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant needs to define what the acronym BUS stands for. It is found within neither the specification nor the claims, and therefore results in the claim being indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2001/0017134 to Bahr in view of US Patent No. 6044843 to O'Neill et al.

8. With regards to claims 1 and 8, what is taught and shown by Bahr is a respirator breathing gas tube (2) for supplying a user with breathing gas, the breathing gas tube comprising: a sensor means (28) at an end of the breathing gas tube facing away from the respirator; a signal line (14) extending along the breathing gas tube and designed to transmit signals of the sensor means to the respirator (Paragraph 19); Bahr teaches that the tube with a first and second ends with an interface at the distal and proximal ends (6 and 8) with the interface between the signal line (14) and the sensor means (28). What is not taught by Bahr is an infrared contactless interface between the signal line and the sensor means. What is taught by O'Neill et al is an airway adapter for monitoring constituent gases that utilizes an infrared photo emitter (11) and photo detector as shown in figure 2 where in there is an infrared contactless interface

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between the signal line and the sensor means. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means (28) taught by Bahr for another sensing means which in this case is infrared photo sensing means with a contactless interface between the signal line and the sensor means as taught by O'Neill et al because it is well known in the art.

9. **With regards to claim 2**, what is taught and shown by Bahr in figures 1-3 is a breathing tube wherein the signal line (14) comprises a fiberoptic waveguide (Paragraph 27).

10. **With regards to claim 3**, what is taught and shown by Bahr in figures 1-3 is a breathing tube wherein the signal line (14) is a two-wire line (Paragraph 19 and 27).

11. **With regards to claim 4**, what is taught and shown by Bahr in figures 1-3 is a breathing tube, wherein the signal transmission between the respirator and the sensor means takes place bidirectionally (Paragraph 27). After reviewing the specification, the examiner has concluded that the applicant never establishes any criticality for having the signal transmission between the respirator and the sensor means takes place bidirectionally via a BUS system. The reference discloses the claimed invention except for mentioning that the signal transmission may take place bidirectionally via a BUS system. It would have been an obvious matter of design choice to one of ordinary skill in the art at the time the invention was made to have signal transmission occur bidirectionally via a BUS system, since the applicant has not disclosed that it solves any stated problem or is of any particular purpose and it appears that the invention would perform equally well with any other bidirectional signal transmission means.

12. **With regards to claim 5**, what is taught and shown by Bahr in figure 1-3 is a breathing gas tube wherein the two-wire line is additionally designed as a tube heater. In paragraph 19, Bahr states that the two-wire line is electrical wire. Therefore it is inherently designed as a tube heater because it well known in the art that electrical wire placed within a breathing tube is often used to humidify and heat the air within a conduit because of the heat generated as current is passed through the wire.

13. **With regards to claims 6 and 7**, what is taught and shown by Bahr in figures 1-3 is a breathing gas tube with all the limitations of claim 6 with the exception of wherein the contactless interface includes a first inductive interface. The applicant states in paragraph 15 "the contactless interface may be a first inductive interface. The first inductive interface may be provided to transmit a supply voltage to the sensor means in addition to the signals. The contactless interface may be an infrared interface." What is taught by O'Neill et al is an airway adapter for monitoring constituent gases that utilizes an infrared photo emitter (11) and photo detector as shown in figure 2 where in there is an infrared contactless interface between the signal line and the sensor means.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means (28) taught by Bahr for an another sensing means which in this case is infrared photo sensing means with a contactless interface between the signal line and the sensor means as taught by O'Neill et al because it is well known in the art. O'Neill therefore inherently already teaches that the contactless interface includes a first inductive interface which would be fully capable of transmitting a supply voltage to the sensor means in addition to the signals.

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14. **With regards to claim 9**, what is taught and shown by Bahr in figures 1-3 is a breathing gas tube wherein the sensor means is designed as an individual sensor means or as a combination for a measurement of temperature, humidity, flow, gas concentrations, or pressure (Paragraph 20 discloses that sensor 28 can be any single sensor such as a pressure transducer or flow meter).

15. **With regards to claim 10**, what is taught and shown by Bahr in figures 1-3 is a breathing gas tube with all the limitations of claim 10 with the exception of wherein a second inductive interface is provided between the breathing gas tube and the respirator. Bahr teaches that the tube with first and second ends with an interface at the distal and proximal ends (6 and 8 respectively) with the second interface connecting the breathing gas tube and the respirator. The applicant states in paragraph 15 the contactless interface may be an inductive interface, and that the contactless interface may be an infrared interface. What is taught by O'Neill et al is an airway adapter for monitoring constituent gases that utilizes an infrared photo emitter (11) and photo detector as shown in figure 2 where in there is an infrared contactless interface between the signal line and the sensor means. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means (28) taught by Bahr for an another sensing means which in this case is infrared photo sensing means with a contactless interface between the signal line and the sensor means as taught by O'Neill et al because it is well known in the art. O'Neill therefore inherently already teaches that the contactless interface includes an inductive interface

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which would be fully capable of transmitting a supply voltage to the sensor means in addition to the signals.

16. **With regards to claims 11 and 16**, what is taught and shown by Bahr in figures 1-3 is a process for using respiration system with a respirator, the process comprising the steps of providing a sensor means (28) for sensing breathing gas characteristics (Paragraph 20 states sensor 28 can be either pressure transducer or flow meter); providing a breathing gas tube (2); providing an interface (6) between the breathing gas tube and the sensor for transmitting sensor signals. What is not taught by Bahr is an infrared contactless interface between the signal line and the sensor means. What is taught by O'Neill et al is an airway adapter for monitoring constituent gases that utilizes an infrared photo emitter (11) and photo detector as shown in figure 2 where in there is an infrared contactless interface between the signal line and the sensor means. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the contact sensing means (28) taught by Bahr for an another sensing means which in this case is infrared photo sensing means with a contactless interface between the signal line and the sensor means as taught by O'Neill et al because it is well known in the art.

17. **With regards to claim 12**, what is taught and shown by Bahr in figures 1-3 is a process further comprising disposing the sensor means (28) at an end of the breathing gas tube (2) facing away from the respirator (40); providing a signal line (14) extending along the breathing gas tube (Figure 1) and transmitting signals of the sensor means to the respirator (paragraph 22) with an interface (6) being provided between the signal

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line and the sensor means. What is not taught by Bahr is an infrared contactless interface between the signal line and the sensor means. What is taught by O'Neill et al is an airway adapter for monitoring constituent gases that utilizes an infrared photo emitter (11) and photo detector as shown in figure 2 where in there is an infrared contactless interface between the signal line and the sensor means. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the contact sensing means (28) taught by Bahr for an another sensing means which in this case is infrared photo sensing means with a contactless interface between the signal line and the sensor means as taught by O'Neill et al because it is well known in the art.

18. **With regards to claim 13**, what is taught and shown by Bahr in figures 1-3 is a process wherein the signal line (14) comprises a fiberoptic waveguide (Paragraph 27) and wherein the signal line (14) is a two-wire line (Paragraph 19 and 27).

19. **With regards to claim 14**, what is taught and shown by Bahr in figures 1-3 is a process wherein the signal transmission between the respirator and the sensor takes place bidirectionally (Paragraph 27). After reviewing the specification, the examiner has concluded that the applicant never establishes any criticality for having the signal transmission between the respirator and the sensor means takes place bidirectionally via a BUS system. The reference discloses the claimed invention except for mentioning that the signal transmission may take place bidirectionally via a BUS system. It would have been an obvious matter of design choice to one of ordinary skill in the art at the time the invention was made to have signal transmission occur bidirectionally via a BUS

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system, since the applicant has not disclosed that it solves any stated problem or is of any particular purpose and it appears that the invention would perform equally well with any other bidirectional signal transmission means.

20. **With regards to claim 15**, what is taught and shown by Bahr in figure 1-3 is a process wherein the two-wire line is additionally designed as a tube heater. In paragraph 19, Bahr states that the two-wire line is electrical wire. Therefore it is inherently designed as a tube heater because it well known in the art that electrical wire placed within a breathing tube is often used to humidify and heat the air within a conduit because of the heat generated as current is passed through the wire.

21. **With regards to claim 17**, what is taught and shown by Bahr in figures 1-3 is a process wherein the sensor means is designed as an individual sensor means or as a combination for a measurement of temperature, humidity, flow, gas concentrations, or pressure (Paragraph 20 discloses that sensor 28 can be any single sensor such as a pressure transducer or flow meter).

22. **With regards to claims 18 and 21**, what is taught and shown by Bahr in figures 1-3 is a respiration system comprising: a respirator/ventilator (40); a breathing gas tube (2) for supplying a user with breathing gas, the breathing tube being connected to said respirator at a proximal end (8; Fig. 3) and said breathing gas tube having a distal end (6); a sensor (28) at a distal end of breathing gas tube; a signal line (14) extending along said breathing gas tube (Figure 1) for transmitting signals of the sensor to said respirator/ventilator (Paragraph 22); an interface (6) between said signal line and said sensor; What is not taught by Bahr is an infrared contactless interface between the

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signal line and the sensor means. What is taught by O'Neill et al is an airway adapter for monitoring constituent gases that utilizes an infrared photo emitter (11) and photo detector as shown in figure 2 where in there is an infrared contactless interface between the signal line and the sensor means. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means (28) taught by Bahr for an another sensing means which in this case is infrared photo sensing means with a contactless interface between the signal line and the sensor means as taught by O'Neill et al because it is well known in the art.

23. **With regards to claim 19**, what is taught and shown by Bahr in figures 1-3 is a respiration system, wherein the signal line (14) comprises a fiberoptic waveguide (Paragraph 27) and wherein the signal line (14) is a two-wire line (Paragraph 19 and 27) establishing bidirectionally signal transmission signals between said respirator/ventilator and said sensor (Paragraph 27).

24. **With regards to claim 20**, what is taught and shown by Bahr in figure 1-3 is a respiration system wherein the two-wire line is additionally designed as a tube heater. In paragraph 19, Bahr states that the two-wire line is electrical wire. Therefore it is inherently designed as a tube heater because it well known in the art that electrical wire placed within a breathing tube is often used to humidify and heat the air within a conduit because of the heat generated as current is passed through the wire.

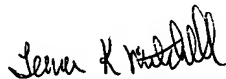
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amadeus S. Lopez whose telephone number is (571) 272-7937. The examiner can normally be reached on Mon-Fri 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on (571) 272-4791. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


TEENA K. MITCHELL
PRIMARY EXAMINER


Amadeus S Lopez
Examiner
Art Unit 3743
September 25, 2006

ASL